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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/922,263	09/02/1997	ROBERT J. CROWLEY	BSME125003	1365
26389	7590	07/21/2006	EXAMINER	
CHRISTENSEN, O'CONNOR, JOHNSON, KINDNESS, PLLC 1420 FIFTH AVENUE SUITE 2800 SEATTLE, WA 98101-2347			SHAY, DAVID M	
			ART UNIT	PAPER NUMBER
			3735	

DATE MAILED: 07/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

08/922,263

Applicant(s)

CROWLEY, ROBERT J.

Examiner

david shay

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on June 30, 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,5,7,15,17,20-30,32-44,47,48,52,53 and 63-65 is/are pending in the application.
- 4a) Of the above claim(s) 20-30,32-44,47,48,52,53,63 and 65 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,5,7,15,17 and 63 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on September 2, \_\_\_\_\_ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

The finality of the previous office action is hereby withdrawn. Below please find a new office action, this action is a result of the request for reconsideration filed June 30, 2006.

Applicant requests rejoinder of claims 64 and 65 asserting that there is no serious burden in examining claims 64 and 65, as their recitations are included in claims 1 and 5 respectively. The examiner must disagree. A proper search for the devices recited in claims 64 and 65 would require a search in 128/897 and 128/899, which is not a required search for the instant method. As this represents a serious burden on the examiner, claims 64 and 65 have been properly withdrawn, as an invention other than that elected by original presentation.

Applicant argues that the examiner has no motivation to combine the Sinofsky and Deak references, as the earliest date of the Deckert et al reference is subsequent applicant's original filing date. The examiner apologizes for this oversight and includes herewith a rejection including the Rosen et al reference, which issued in 1991 and is therefore prior to applicant's earliest filing date. In view of the teachings of Rosen et al, the examiner respectfully submits that the combination in the instant rejection has an adequate showing of motivation. Thus applicant's arguments to the contrary, based on the Deckert et al reference, are not persuasive. Further the assertion that the principle of operation of the Sinofsky patent is altered by the modification taught by Deak is inaccurate. The principle of operation of Sinofsky is that wavelengths that are not easily transmitted by optical fibers may be applied to internal body tissue by situating the laser producing these wavelengths at the distal tip, rather than the proximal end of the catheter.

With regard to the teaching of the use of a plano-convex lens, the examiner asserts that the field of ultrasonics is sufficiently mature such that the substitution of equivalents such as the

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use of a plano-concave lens in front of a planar transducer (with the planar side facing the planar transducer and its wave matching layer, so as to create the same composite shape as the plano-concave transducer of Deak), rather than forming the transducer itself as plano-concave or employing various other boundary shapes with various relative acoustic impedance properties. This is evidenced by the fact that applicant has gone to no effort to elucidate the specific design or exact dimensions of the concave lens, thus clearly the production of the precise surface which is required to focus the ultrasound is within the scope of one having ordinary skill, else applicant's originally filed disclosure is fatally defective. The ability to design the specific surface of the lens requires the ordinarily skilled artisan to have a thorough understanding of the behavior of ultrasonic waves traveling in various materials, and their behavior as they traverse various material boundaries. Given this understanding, the design of a transducer-lens system to substitute for the parabolic transducer of Deak is well within the scope of one having ordinary skill in the art, and absent a demonstrated criticality, is an obvious design choice.

With regard to the teaching of a partially transparent chamber, applicant is respectfully reminded that the device of Deak emits light, this necessarily requires a transparent portion, as one having ordinary skill in the art would readily perceive. With regard to the teaching that the sonoluminescent light comprises x-ray radiation, this is considered to be inherent in the device of Deak. It is noted that applicant discloses no particular configuration that enables the production of sonoluminescent light in the x-ray region, the disclosure merely recites that UV and X-ray radiation are produced, thus the generation of such radiation must be inherent in the production of sonoluminescence, else applicant's disclosure is fatally defective, as not fully disclosing how to

make and use the invention. Even if this were not so, the disclosure of Deak contemplates the production of other light, including e.g. ultraviolet, and thus would include X-rays as well.

Regarding applicant's assertion that no admission was made regarding the obviousness of using filters as claimed, the examiner must, respectfully disagree. The examiner first gave official notice of the use of filters as claimed in the office action mailed July 24, 2002 (see the paragraph bridging pages 4 and 5 thereof). Applicant's attention is respectfully invited to MPEP 2144.03, specifically part B, which states that when official notice is taken of a fact unsupported by documentary evidence, the technical line of reasoning must be clear and unmistakable, the examiner provided the clear reasoning that filters are used to reduce the exposure of undesirable wavelengths. This presented applicant with an opportunity to challenge the assertion in the next reply after the office action in which the official notice was taken. Attention is further respectfully invited to part (C) of MPEP 2144.03, which states that applicant may challenge the examiner's taking of official notice, however, to "adequately traverse such a finding, an applicant must specifically point out the supposed errors in the examiner's action, which would include stating why the noticed fact is not considered to be common knowledge or well known in the art...(citation omitted)...A general allegation that the claims define a patentable invention without any reference to the examiner's assertion of official notice would be inadequate."

It is further respectfully noted that applicant's response to the office action mailed July 24, 2002, which response was filed on March 28, 2003, made no mention of the official notice whatsoever, and in fact did not even specifically discuss the rejection of claim 15 in any way, instead relying on the purported patentability of claim 1 to support the patentability of the dependents of claim 1. As such this constitutes a failure to traverse the examiner's holding of

official notice in the next action. Similarly, the assertion of lack of admission on applicant's part, of the officially noticed fact of July 24, 2002, does not appear to be a traversal of the examiner's notice, even if it could be considered to be so, it is not adequate as set forth in MPEP 2144.03. Thus applicant having been amply apprised of the examiner's finding, so as to have the opportunity to make such a challenge, and has failed to do so for more than three years, and five office actions after the fact. As such the finding of the examiner is conclusive. See *in re Alhert* 165 USPQ 418, citing *In re Perkins* 146 USPQ 63.

With regard to the rejection based on Putterman et al, applicant asserts that there is no suggestion to combine Putterman et al with either Sinofsky or Deak. The examiner respectfully notes that the provision of a material to produce sonoluminescence, when no particular material is disclosed by Deak is ample motivation to combine the references.

The drawings are objected to because the figure legends, indicia, and cross-hatching are poor, Figures 3C and 8D are not drawn so as to clearly show all features in the Figures. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an

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application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1, 5, 7, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sinofsky in combination with Rosen et al, Deak and the admitted prior art of employing a filter for reducing exposure to undesirable wavelengths. Sinofsky teaches a light applicator with an internally inserted treatment light source and a method such as claimed except for the use of sonoluminescent light. Rosen et al teach the desirability of employing electrical conductors in the place of optical fibers. Deak teaches a laser wherein the output light is generated by sonoluminescence. It would have been obvious to the artisan of ordinary skill to employ the laser of Deak in the method of Sinofsky, since Sinofsky teaches a variety of laser configurations, and since the laser of Deak only requires a few parts and no optical fibers, since only electrical energy need be transmitted through the catheter, which increases energy transmission and does not require matching transmission wavelengths, as taught by Rosen et al, or alternatively to employ the method of Sinofsky in the method of Deak, since this provides a medical application, and in either case it would have been obvious to the artisan of ordinary skill to employ a focusing lens having a flat surface adjacent the wave matching layer and a concave surface adjacent the acoustic conductive medium, as this is just a matter of choice, since the configuration of Deak is equivalent to that claimed, as they both provide a focused beam, thus this particular

configuration is not critical and provides no unexpected result; and further to employ a filter, since this is a notorious device for reducing exposure to undesirable wavelengths, official notice of which has already been taken, thus producing a device such as claimed.

Claims 17 and 63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sinofsky in combination with Rosen et al, Deak and the admitted prior art of employing a filter for reducing exposure to undesirable wavelengths, as applied to claims 1, 5, 7, and 15 above, and further in view of Putterman et al. Putterman et al teach that the generation of x-rays occurs during sonoluminescence and the use of lead zirconium titanate as a transducer material suitable for producing sonoluminescence. It would have been obvious to the artisan of ordinary skill to employ the transducers of Putterman et al, since these are capable of producing sonoluminescence and Deak teaches no particular transducer material, and because the use of lead zirconium titanate is not critical and produces no unexpected result, thus producing a device such as claimed.

Applicant's arguments filed June 30, 2006 have been fully considered but they are not persuasive. The arguments are not persuasive for the reasons set forth above.

Applicant's arguments with respect to claims 1, 5, 7, 15, 17, and 63 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to david shay whose telephone number is (571) 272-4773. The examiner can normally be reached on Tuesday through Friday from 6:30 a.m. to 5:00 p.m.

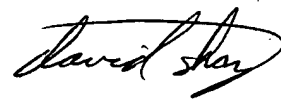
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Marmor, II, can be reached on Monday, Tuesday, Wednesday, Thursday, and



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Friday. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



DAVID M. SHAY  
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